

Fig. 1

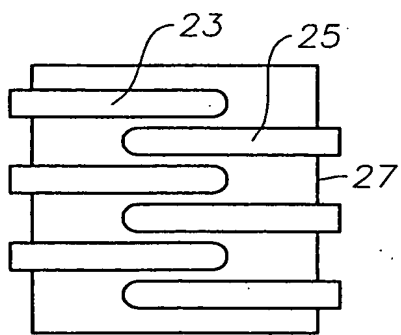


Fig. 2A

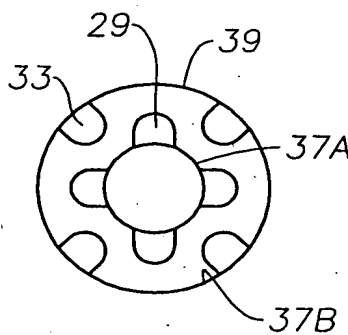


Fig. 2B

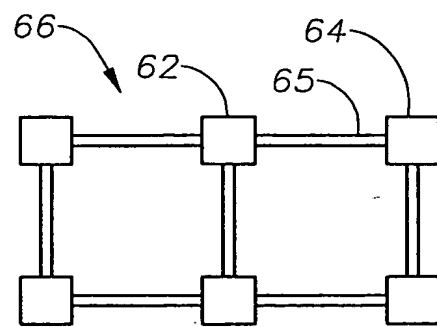
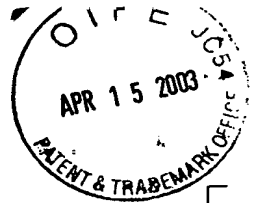


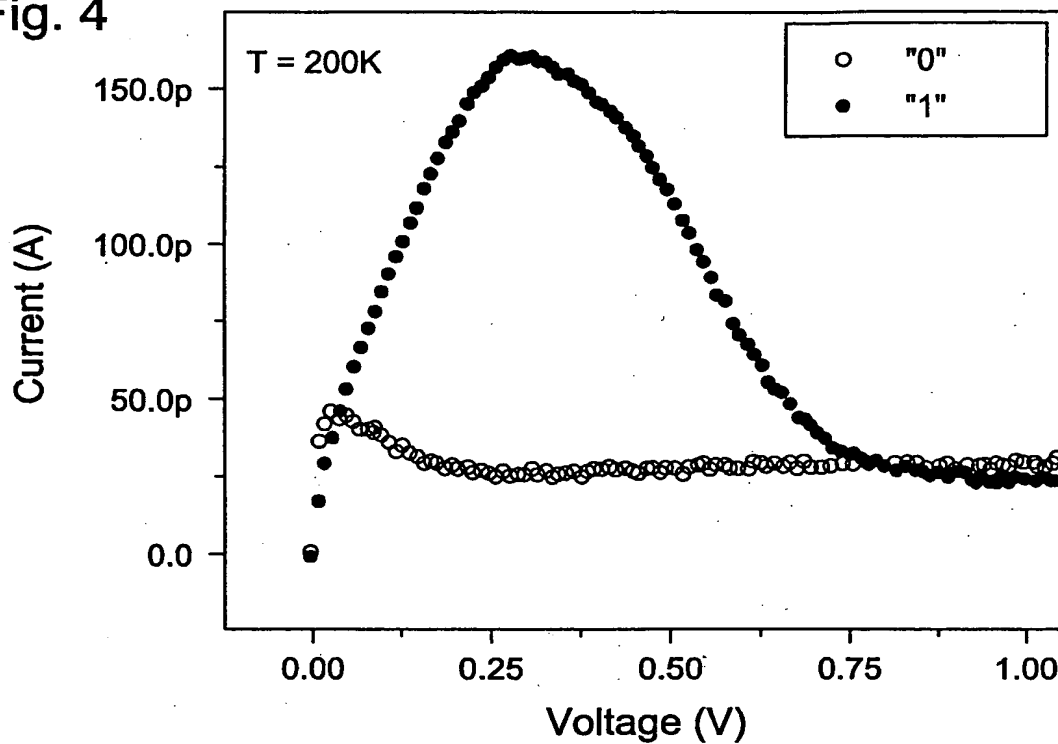
Fig. 5



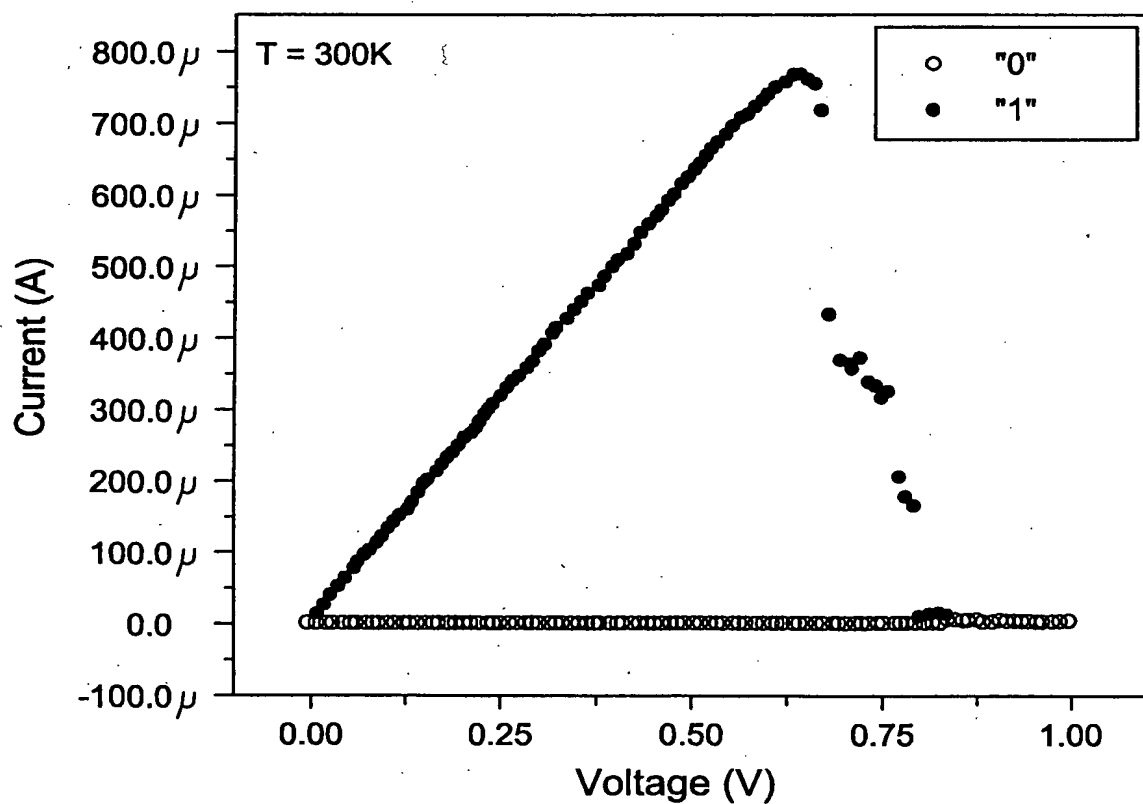
2/4

1, X = H

Fig. 4



2, X = NO₂





3/4

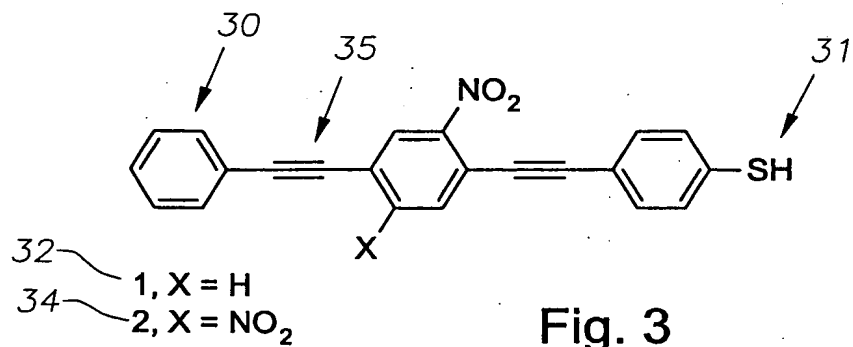
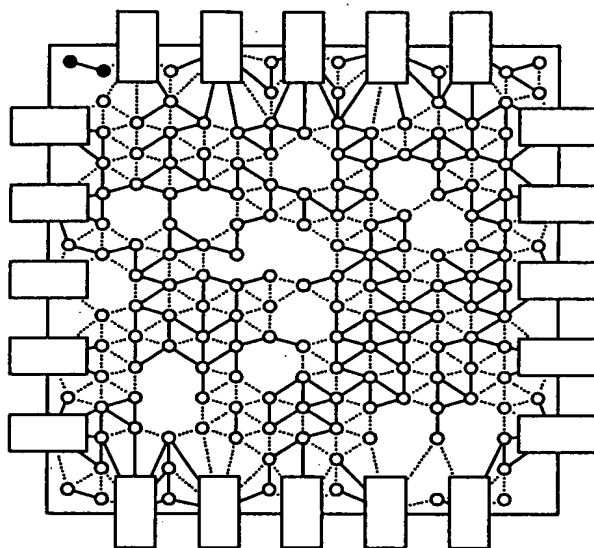


Fig. 3

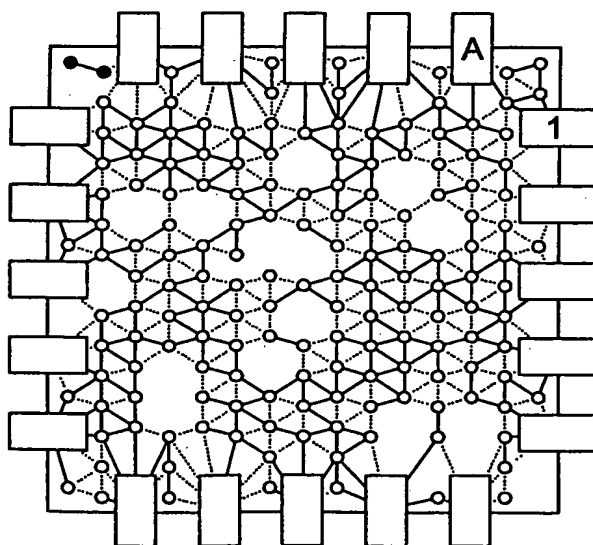
Untrained Nanocell

Fig. 7



Nanocell Trained as Inverter

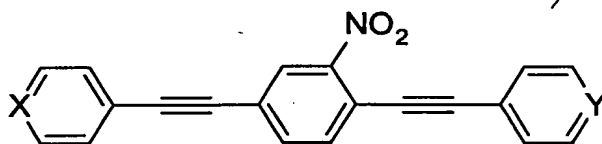
Fig. 8



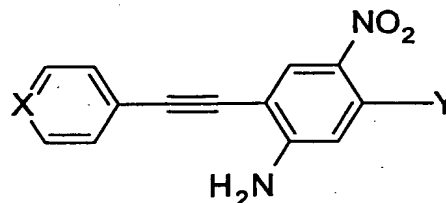
Inverter Truth Table	
Input A	Output 1
0	1
1	0



4/4



X = Y = N
 X = CH =, Y = N
 X = N, Y = CH



X = N, Y = ethynylpyridine
 X = CSAc, Y = ethynylpyridine
 X = N, Y = phenyl

Fig. 6

Nanocell Trained as Nand

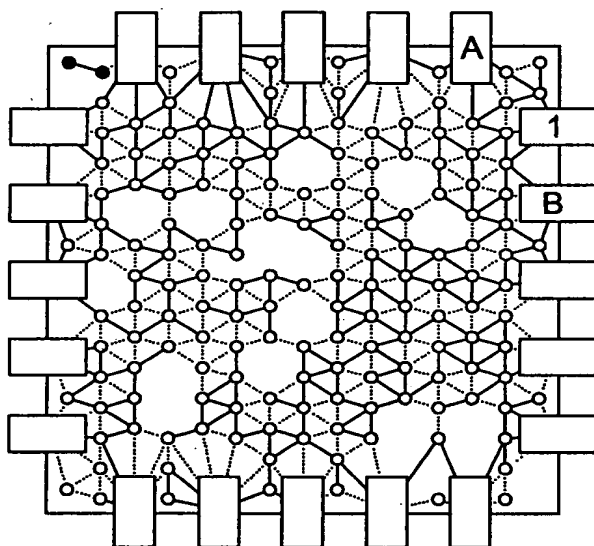
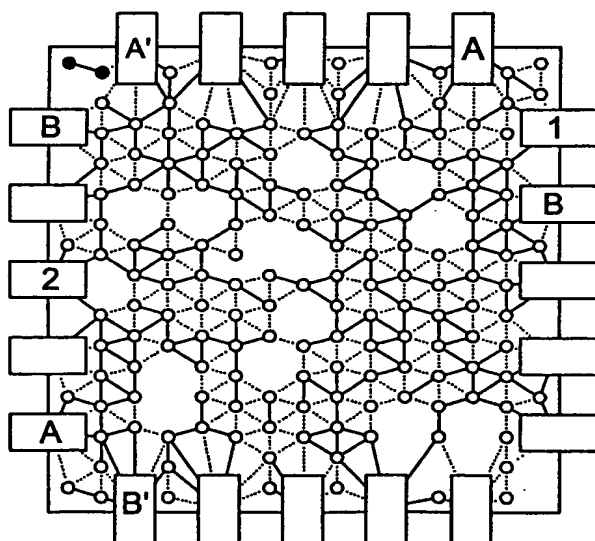


Fig. 9

Nand Truth Table		
Input A	Input B	Output 1
0	0	1
0	1	1
1	0	1
1	1	0

Nanocell Trained as Inverse Half Adder

Fig. 10



Inverse of Half Adder Truth Table			
Input A	Input B	Output 1	Output 2
0	0	1	1
0	1	1	0
1	0	1	0
1	1	0	1